REMARKS/ARGUMENTS

Reconsideration of this patent application is respectfully requested in view of the foregoing amendments and the following remarks.

Claims 4-6 have been amended. No new matter has been added.

In the Office Action of September 9, 2004, the Examiner stated that the rejections under 35 U.S.C. §112 were not responded to and that the claims need to be distinguished over the prior art. Applicants have amended claims 4-6 to delete the term "means" where it is superfluous, and to add phrases connecting the various claimed components. Support for these amendments can be found in the drawings, which show all of the components connected to, adjacent to or at an outlet of the adjacent component.

The Examiner rejected claims 1-3 as being unpatentable over *GB 2,265,918* in view of *Blanchette*. Applicants respectfully traverse.

PAGE 9/14 * RCVD AT 2/8/2005 12:16:44 PM [Eastern Standard Time] * SVR:USPTO-EFXRF-1/1 * DNIS:8729306 * CSID:516 365 9805 * DURATION (mm-ss):03-10

Blanchette discloses a method of using biological processes as a pre-treatment step in combined biological and mechanical paper pulping process. The process according to *Blanchette* makes use of a particular species of fungus which is Ceriporiopsis subvermispora, and the selected plant is Southern Yellow Pine or Loblolly Pine (column 3, lines 38-39, 49-52; column 5, lines 17, 28). To inoculate significant volumes of wood chips, a starter inoculum must be prepared. The starter inoculum is simply a smaller volume of chips carrying the fungal mycelium propagated therethrough so that it may be conveniently mixed into a larger volume of chips to be subjected to the process. In the laboratory scale procedures described, a plate culture is created. The wood chips for procedure are placed in the fermentation reactor and the inoculation of the starter inoculant culture is made to the wood chips to be treated (column 6, lines 11-13, 27-28, 47-48).

Figure 1 shows a bioreactor having approximately 21x16x3.3 inches in size. *GB 2265918* discloses a process and an apparatus for the manufacture of cellulosic pulp comprising treating the material with a reactive alkaline liquor and then treating said material with aqueous magnesium salt such as magnesium sulphate

PAGE 10/14 * RCVD AT 2/8/2005 12:16:44 PM [Eastern Standard Time] * SVR:USPTO-EFXRF-1/1 * DNIS:8729306 * CSID:516 365 9805 * DURATION (mm-ss):03-10

or magnesium carbonate, treating it with oxygen and treating the mixture in order to obtain the final product. In this process, as well in the relative apparatus, there is no mention of any enzyme extract with which the vegetable mass might be treated. The process relates to a chemical treatment of a vegetable mass, and there is no mention of the biological treatment of the raw products with enzyme, nor mention of a process and apparatus involving any enzyme preparation and/or utilization.

The present application relates to an apparatus for the production of cellulose pulps starting from cultured vegetative biomasses. Figure 1 shows schematically the enzyme production cycle, while Figure 2 shows the biological treatment cycle, the two Figures being connected through the arrow on the right-hand side of FIG. 1, which means that the enzyme production apparatus is directly connected with the biological treatment apparatus. In fact, at page 14 of the specification, it is written that "...such suspension (containing the enzyme) undergoes a double pressing and backwashing which extracts the enzyme almost completely; the enzyme is sent on directly, according to a continuous method, to the treatment of the vegetation to be transformed into paper pulp, while the exhausted material resulting from the pressing

PAGE 11/14 * RCVD AT 2/8/2005 12:16:44 PM [Eastern Standard Time] * SVR:USPTO-EFXRF-1/1 * DNIS:8729306 * CSID:516 365 9805 * DURATION (mm-ss):03-10

gets out of the biological cycle and may be utilized to produce compost or the like".

Furthermore, at page 19 is written: "According to the present invention, all the operations concerning the production of the enzyme are carried out according to a continuous method, and therefore, the running of the enzyme production plant can be fully automated with extreme easiness. At the same time, the storing time and quantity, which would need particular cares especially as concerns preservation temperature, is reduced to a minimum".

In view of the above, the main feature of the present invention, apart from dealing with different fungi species and different vegetable plants, is that the apparatus is a continuous apparatus in which the enzyme is produced and immediately used in the same apparatus for the biological treatment of the vegetable masses, while the apparatuses according to the prior art, always refer to the enzyme production which is different, separated and treated in a different manner with respect to the treatment of the vegetable masses. Combining the GB reference with *Blanchette* would not lead to the present invention because neither reference

PAGE 12/14 * RCVD AT 2/8/2005 12:16:44 PM [Eastern Standard Time] * SVR:USPTO-EFXRF-1/1 * DNIS:8729306 * CSID:516 365 9805 * DURATION (mm-ss):03-10

teaches or suggests a continuous apparatus in which the enzyme is produced and immediately used for biological treatment of vegetable masses.

The Applicants believe that claims 4-6 are written to overcome the rejections of the Examiner. Accordingly, Applicants respectfully request early allowance of the claims.

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Enclosure: Copy of Petition for 4-month Extension of Time

CERTIFICATE OF FACSIMILE TRANSMISSION

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I hereby certify that this correspondence is being sent by facsimile transmission to the U.S. Patent and Trademark Office on February 8, 2005.

Elizabeth Collard Richter

PAGE 13/14 * RCVD AT 2/8/2005 12:16:44 PM [Eastern Standard Time] * SVR:USPTO-EFXRF-1/1 * DNIS:8729306 * CSID:516 365 9805 * DURATION (mm-ss):03-10